-x2.11:74-1

AUG 20 1973

MIAMI UNIVERSITY LIBRARY

July 1973 No. 74-1

STATISTICAL REPORTER

Current developments in Federal statistics

STATISTICAL REPORTER

Prepared Monthly by the Statistical Policy Division

CONTENTS

Page

1 MEASURING CURRENT ECONOMIC FLUCTUATIONS
10 CURRENT DEVELOPMENTS
10 Characteristics of One-Bank Holding Companies
11 NSF Reports on National R&D Resources
11 Internal Migration
11 Use of SMSA for Federal Program Purposes
12 U.S. Population by Ethnic Origin
12 Spanish Origin Persons in U.S.
12 N.Y. Income and Expenditure Projections
12 Population and Economic Activity in the United States and SMSAs
13 BLS Report Examines Union Contracts
13 Social Security Research Publications
14 Historical Development of Economic Censuses
14 OMNITAB Users' Guide
15 Geographic Base File System
15 Recent Vital and Health Statistical Reports
16 Enterprise Statistics
17 SCHEDULE OF RELEASE DATES FOR PRINCIPAL FEDERAL ECONOMIC INDICATORS
19 SELECTED NEW REPORTING PLANS AND FORMS
19 PERSONNEL NOTES

SUBSCRIPTIONS ($3.50 a year) should be sent to the Government Printing Office, Washington, D.C. 20402. Make checks payable to the Superintendent of Documents.

SUGGESTIONS, contributions, and inquiries may be addressed to: Statistical Reporter, Statistical Policy Division, Office of Management and Budget, Washington, D.C. 20503.

EXECUTIVE OFFICE OF THE PRESIDENT

Office of Management and Budget

Roy L. Ash
Director

Julius Shiskin
Chief Statistician

Emily T. White
Editor of Statistical Reporter

STATISTICAL REPORTER is prepared primarily for the interchange of information among Government employees engaged in statistical and research activities. Views expressed in contributed notes or articles do not necessarily reflect the policy or opinions of the Office of Management and Budget.

Sources and availability are shown for each publication and requests should be made to the source indicated. If "GPO" is shown, order from the Superintendent of Documents, Government Printing Office, Washington, D.C. 20402.

STATISTICAL REPORTER EDITORIAL COMMITTEE

Paul F. Krueger, Chairman, Office of Management and Budget
J. Richard Grant, Department of Agriculture
John J. Casserly, Department of Commerce, Census Bureau
Herbert C. Morton, Bureau of Labor Statistics
Roye L. Lowry, Office of Management and Budget
Edward Margolin, Interstate Commerce Commission
Albert Mindlin, D.C. Government
Richard C. Simonson, Department of Health, Education, and Welfare
Kenneth B. Williams, Federal Reserve Board

Measuring Current Economic Fluctuations [1]

By Julius Shiskin

Chief Statistician, Office of Management and Budget [2]

I. The Issues

Economists have found it useful to consider economic time series fluctuations as a composite of systematic and irregular movements. The systematic movements in the economy—the signals—reveal seasonal patterns, cyclical movements, and long-term trends. The irregular fluctuations—the noise—are a composite of erratic real world occurrences and measurement errors. Separation of the systematic components provides a better basis for studying causal factors and forecasting changes in economic activity. Separation of the irregular components provides a basis for balancing costs of reducing statistical errors against resultant gains in accuracy.

A substantial effort to measure the relative magnitudes of these different components has been made in recent years. This effort has been greatly facilitated by the availability of Census Method II which provides such measures at high speed and low cost. But this computer program, in common with other methods of decomposing time series, produces only measures of historical performance, whereas the greater interest is in the relative magnitudes of the components in the most recently available figures. Current measures of the components differ from historical measures partly because the moving average methods employed in Census Bureau Method II require estimates of data for future years and partly because reported figures for current months are often preliminary estimates, based upon incomplete returns.

This paper is addressed to the questions: (1) What happens to the noise-signal ratio as we move from historical to current observations? and (2) How can this ratio be useful in analyzing the most recent trends?

The method of the paper is to describe historical relationships, among the cyclical, seasonal and irregular factors, mostly on the basis of up-dated earlier studies. Measures of the impact of various measurement problems on current estimates of these factors for 18 principal U.S. economic indicators are then provided and interpreted.

II. Amplitudes of Different Types of Economic Fluctuations

Some years ago (1957) an analysis was made of the cyclical, seasonal, and irregular amplitudes of a set of about 150 series considered to be broadly representative of the various activities of the U.S. economy.[3] This study revealed that seasonal movements dominated other kinds of month-to-month movements in most current economic series. Seasonal movements are always larger than either irregular or cyclical movements, and are often larger than the other two types combined.

More specifically, for the 150 series studied, the average monthly amplitude of seasonal fluctuations exceeded that of the cyclical factor in 78% of the series, exceeded the irregular factor in 65% of the series, and exceeded the combined cycle-trend and irregular factors in 45% of the series. Furthermore, where the seasonal factor is larger than the other factors, it is often much larger. The seasonal factor is three or more times larger than the cyclical factor in 45% of the series, and three or more times larger than the cyclical and irregular fluctuations together in 11% of the series. These observations apply to intervals of one month; over

---

[1] Reprinted, with permission, from the *Annals of Economic and Social Measurement* Volume 2, No. 1, (January 1973) pp. 1-15, published by the National Bureau of Economic Research.

[2] Adapted from a longer article prepared for a Conference of European Statisticians meeting, June 26–30, 1972. The writer is greatly indebtedly to Dr. Marie D. Wann of OMB and Morton Somer of the U.S. Department of Commerce for valuable assistance in the preparation of this article.

[3] Julius Shiskin, "Decomposition of Economic Time Series," *Science*, Vol. 128, No. 3338 (December 19, 1958), pp. 1539–1546.

longer spans the relative importance of the several components would, of course, be different (see Table I).[4]

TABLE I

Percent of Total Variation Contributed by Statistical Components of the Total Retail Sales Series, United States, 1960–1971

Component	Percent of Variation	
	Month-to-month	Twelve-month spans
Holiday	0.2	0.2
Trading day	33.0	5.1
Seasonal	65.2	0.0
Irregular	1.1	1.6
Trend-cycle	0.5	93.1
Total	100.0	100.0

Chart I illustrates the various types of economic fluctuations for retail sales in the U.S. The chart also shows the seasonally adjusted retail sales series in current dollar and in deflated form. Table I shows how seasonal and trading day fluctuations, which dominate the short-term movements, give way in relative importance to the trend-cycle factor when comparisons are made over longer periods. This indicates one major source of difficulty in discerning the underlying trend-cycle movements in current monthly figures, and the need to observe data over longer spans to make sound judgments on recent cyclical trends.

Measures of the amplitudes of different types of fluctuations are shown for 18 principal economic indicators in Table II. In addition to the measures usually shown, this table includes a measure of changing seasonality, the average year-to-year change in the seasonal factors (S_{12}) shown in Column 4. Like the other measures, this is computed by Census Method II, X-11 variant.[5] S_{12} is usually a small fraction of the month-to-month movements in other types of economic fluctuations (Cols. 7–9).

III. Reducing Noise in Current Observations

In addition to the irregular component, there are also other sources of "noise' which tend to obscure "signals." As will be shown, some of these noise components are readily measured on a historic basis, but they tend to be especially troublesome on a current basis, just when the need for the signal is greatest.

1. *Revisions in raw data.*[6] There is great pressure upon statistical agencies to issue figures promptly. Early figures usually must be based upon small samples or on partial returns, and revised later to provide more accurate estimates. Estimates resulting from these pressures raise questions about the acceptable accuracy of early estimates. Furthermore, there is always concern about the quality of final figures.

Interim estimates between first and final figures are often helpful, but they, too, are subject to question. Theoretically, new estimates should be issued as soon as additional data are received in order to make available the most accurate information for policy makers. Conceivably, in a survey like retail sales, where there is a continuous flow of returns, a new estimate could be prepared every day. But frequent revisions are also a nuisance and costly, and some contain no new information. Moreover, revisions tend to undermine public confidence in the statistics. For these reasons, a policy for limiting current revisions is desirable.

The U.S. Office of Management and Budget has recently issued a set of guidelines to Federal agencies having responsibility for major economic series. The guidelines are intended to provide general policy and procedures for balancing speed and accuracy in the release of economic data and for limiting revisions.

The first objective of the guidelines is to indicate a standard of acceptability of final figures for principal monthly and quarterly economic indicators. The adoption of this standard will have the eventual effect of improving the quality of final figures for the current economic indicators which do not now meet the standards. The guideline which has been adopted to achieve this objective is as follows:

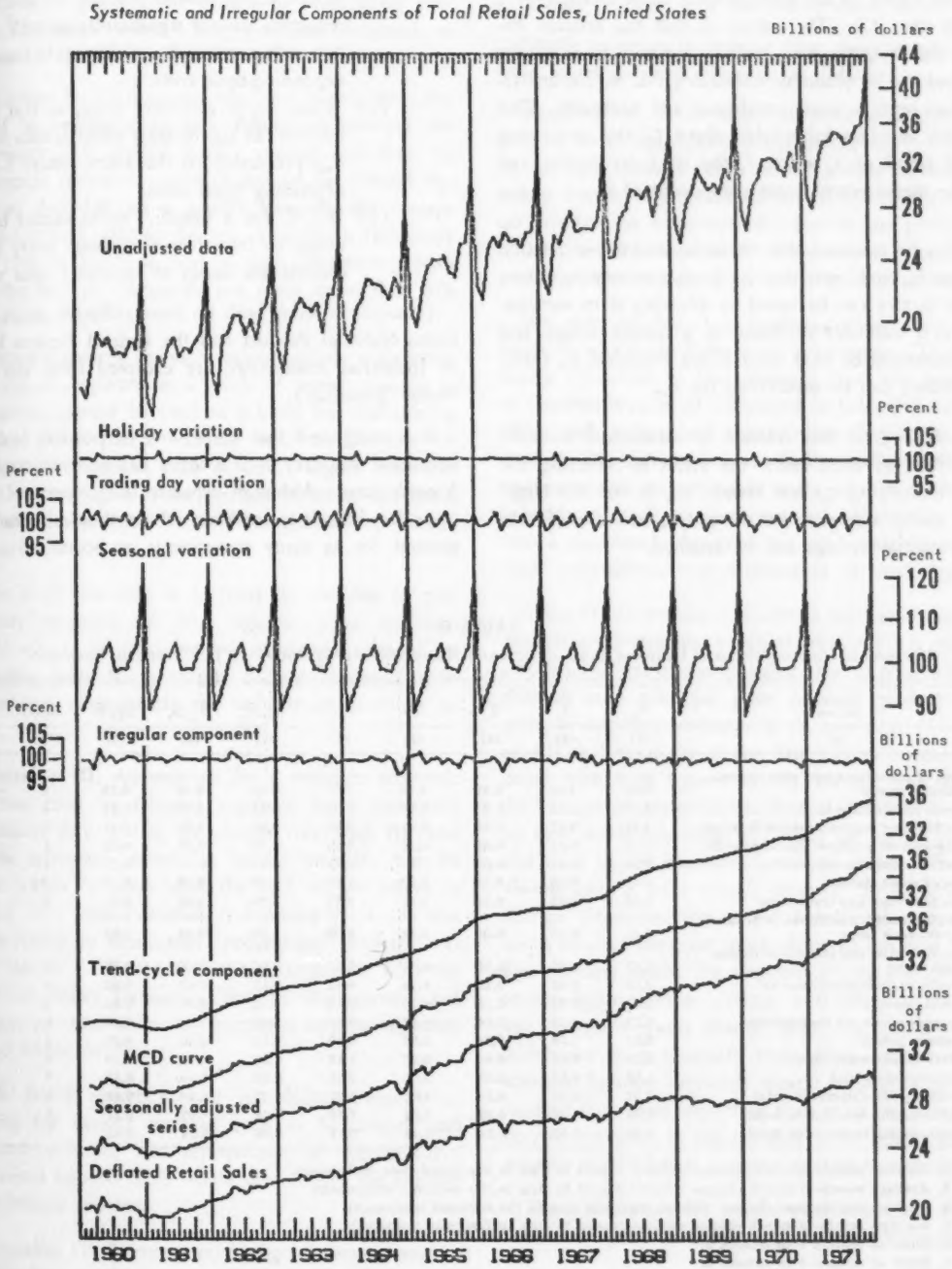
[4] While the emphasis in the present paper is on monthly series, it should be noted that some economic data are collected on a quarterly basis, and many monthly series are summarized into quarterly aggregates, such as Gross National Product. For such series, a seasonal adjustment is performed on a quarterly basis using methods quite similar to those for monthly series.

[5] Julius Shiskin, "Electronic Computers and Business Indicators," *The Journal of Business*, Vol. XXX, No. 4 (October, 1957), pp. 219–267 (reprinted as Occasional Paper No. 57 by the National Bureau of Economic Research, 1957, and as Chapter 17 of Business Cycle Indicators, 1961; also published in French under the title, "Calculateurs Electroniques et Indicateurs de Conjoncture," by the University de Bordeaux, France, 1960). See also Julius Shiskin, Allan H. Young, and John C. Musgrave, "The X-11 Variant of the Census Method II Seasonal Adjustment Program," Technical Paper 15, Bureau of the Census, U.S. Department of Commerce (November, 1965), and Julius Shiskin, "Seasonal Adjustment," International Encyclopedia of the Social Sciences (1968).

[6] The form of the series prior to seasonal adjustment is sometimes referred to as raw data, unadjusted series, and original data. These terms are used interchangeably in this paper.

Chart I

Systematic and Irregular Components of Total Retail Sales, United States



Guideline I. With regard to final figures (or the last estimate made on a current basis), the goal should be to achieve a ratio of the amplitude of the average irregular factor to the average cycle-trend factor ($\bar{I}/\bar{C}$) of less than 1.0. The reason is that the relation between the irregular and cyclical factor is basis to the principal use of economic indicators, that is, for analyzing short-term business conditions and prospects. This approach involves knowledge about C, the underlying cyclical trend of a series; I, the irregular factor; and E_m, the measurement error component of I.

It can be assumed that there is an inverse relation between E_m and cost; that is, it costs money to reduce E_m and money can be saved by allowing it to increase. Further, if estimates are based on a sample design, and if measurement of total error is not available, E_s (sampling error) can be substituted for E_m.

(a) If $\bar{I} < \bar{C}$, this relation is satisfactory because, then in most cases, the series is reflecting the underlying cyclical trend. E_m is not too large, and it can even be allowed to increase, if substantial savings can be attained.

(b) If $\bar{I} > \bar{C}$, then this relation may not be acceptable because, in most cases, the series will be reflecting irregular movements.

(1) When E_m is relatively small, so that a reduction cannot significantly affect $\bar{I}$, then stay with previous E_m or allow it to increase, depending upon costs.

(2) When E_m is relatively large, so that a reduction can significantly affect $\bar{I}$, then reduce E_m, preferably to the point where $\bar{I} < \bar{C}$, depending upon costs.

(3) If $\bar{I}/\bar{C}$ for a monthly series cannot be reduced to less than 6 without heavy costs, convert the series to quarterly time units.

(Composite series built up from collected series, e.g., Gross National Product and the Federal Reserve Index of Industrial Production, are excepted from this particular guideline).

It is recognized that it may not be possible to calculate these measures until a series has been collected for 5 or 6 years. Although separate components of total error are difficult to measure, efforts should be made to account for as many components as possible.

TABLE II

Measures of the Amplitudes of Different Types of Economic Fluctuations 1965–1969—18 U.S. Economic Indicators

BCD No.	Series	$\bar{C}_1$	$\bar{S}_1$	$\bar{S}_{12}$	$\bar{I}_1$	$\bar{I}_1/\bar{C}_1$	$\bar{S}_{12}/\bar{C}_1$	$\bar{S}_{12}/\bar{S}_1$	$\bar{S}_{12}/\bar{I}_1$	MCD	F
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
6.	Value of manufacturers' new orders, durable goods	0.80	4.94	0.31	2.36	2.97	0.39	0.06	0.13	3	54.3
28.	Private housing starts	1.96	11.71	0.61	5.70	2.91	0.31	0.05	0.11	4	128.1
29.	New building permits, private housing	2.51	9.87	0.62	5.91	2.36	0.25	0.06	0.11	3	181.1
41.	Employees on nonagricultural payrolls	0.30	0.61	0.05	0.10	0.35	0.18	0.09	0.51	1	250.3
47.	Index of industrial production	0.54	2.01	0.09	0.44	0.82	0.17	0.05	0.21	1	80.7
54.	Sales of retail stores	0.49	5.53	0.12	0.82	1.65	0.25	0.02	0.15	2	779.8
56.	Manufacturing and trade sales	0.53	3.73	0.13	1.21	2.27	0.24	0.03	0.11	3	118.3
65.	Manufacturers' inventories of finished goods, book value	0.63	0.76	0.06	0.18	0.29	0.10	0.08	0.35	1	188.1
71.	Manufacturing and trade inventories, book value	0.67	0.66	0.04	0.14	0.21	0.06	0.06	0.30	1	116.2
502.	Exports, excluding military aid	0.72	5.23	0.12	6.78	9.42	0.17	0.02	0.02	6	8.1
512.	General imports	1.27	3.75	0.18	4.76	3.76	0.14	0.05	0.04	5	8.1
750.	Wholesale prices, all commodities	0.28	0.15	0.04	0.17	0.62	0.13	0.24	0.20	1	9.7
781.	Consumer prices	0.32	0.08	0.04	0.09	0.29	0.12	0.44	0.40	1	13.9
842.	Civilian employment, total	0.20	0.83	0.06	0.22	1.13	0.32	0.08	0.28	2	175.5
843.	Unemployment, total	1.13	9.56	0.88	2.75	2.44	0.78	0.09	0.32	3	43.6
901.	Manufacturing shipments, total	0.57	4.26	0.18	1.01	1.77	0.32	0.04	0.18	2	146.1
902.	Manufacturing new orders, total	0.60	4.07	0.28	1.32	2.18	0.46	0.07	0.21	3	71.2
903.	Manufacturing inventories, total	0.72	0.30	0.04	0.13	0.18	0.06	0.14	0.33	1	65.4

Column 2. Average month-to-month change without regard to sign in the trend-cycle component.
Column 3. Average month-to-month change without regard to sign in the seasonal component.
Column 4. Average year-to-year change without regard to sign in the seasonal component.
Column 5. Average month-to-month change without regard to sign in irregular component.
Column 6. Ratio of column 5 to column 2.
Column 7. Ratio of column 4 to column 2.
Column 8. Ratio of column 4 to column 3.
Column 9. Ratio of column 4 to column 5.
Column 10. Number of months for cyclical dominance.
Column 11. F-ratio for test of stable seasonality. An F of 2.4 or more indicates stable seasonality present at the 1% level.

The second objective is to set a standard for the accuracy of preliminary estimates. This would result in smaller revisions, although it may also have the effect of slowing down the release of preliminary estimates for some series. The guideline designed to achieve this objective follows:

Guideline II. Each survey resulting in two estimates should be organized so that differences between the preliminary and revised figures average less than ½ the average month-to-month change in the revised figures, so that differences greater than ½ the average month-to-month change do not occur more frequently than 25% of the time, and so that differences greater than the average change do not occur more than 5% of the time.

Historical records for each series, together with whatever may be expected as a result of recent changes in the survey, should be used as a basis for determining whether these criteria will be met. In the case of highly sensitive series, such as GNP, higher standards should be developed by the agencies on an *ad hoc* basis, and submitted to the Office of Management and Budget for review.

The third objective is to limit the number of preliminary estimates of final figures. This provision would reduce the total number of figures released on a current basis for principal current economic indicators, and consequently the number of revisions issued.

Guideline III. An estimate for a principal economic indicator must be released regularly on a previously announced date within the month following the end of the reference period. A second estimate may be made within 60 days after the end of the reference period. If a second estimate is regularly made, the first figure should be designated "preliminary" and the second "revised." Except by prior arrangement with the Statistical Policy Division, Office of Management and Budget, no more than two estimates may be regularly issued within 60 days.

The fourth objective is to consolidate revisions occurring for various reasons, such as benchmark and seasonal revisions, and replacement of "preliminary" by revised figures. This would also reduce the number of published revisions.

Guideline IV. Revisions occurring for various reasons, such as benchmark and seasonal revisions and replacement of "preliminary" by revised figures, should, as far as possible, be consolidated and released simultaneously. Figures resulting from benchmarking and revisions in seasonal factors will, in general, be referred to as "final," though it is realized that in some series additional revisions will have to be made later.

Finally provision is made in these guidelines to eliminate biases in early estimates, as follows:

Guideline V. If revisions in preliminary estimates tend to occur significantly more frequently in one direction than another, then efforts should be made to reduce bias by improvements in the survey. If this is not feasible, an adjustment for bias in the preliminary figures should be developed. Separate analyses for expanding and contracting periods may be desirable.

We also considered a guideline eliminating small revisions which add little or no information. There was strong opposition to this proposal from the producers of statistics because of difficulties in balancing out their tables each month and maintaining accurate historical records. For this reason, we finally concluded that the unquestionable advantage to users of eliminating the nuisance of small revisions was not sufficient to justify such a guideline. However, the guidelines do not preclude nonpublication or elimination of small revisions.

Table III shows the revisions in the month-to-month changes in seasonally adjusted data for 12 principal monthly U.S. economic indicators and quarter-to-quarter changes in 3 principal gross national product aggregates, arising from revisions in the raw data. This table reveals that revisions of the first figures released compared with final figures usually average less than ½ the average month-to-month change (Col. 6), the value we have tentatively taken as critical for current analysis, and used in the standards set forth above. These revisions have a wide range—from 21 to 86% of this change. However, the second figures released, usually about 30 days later, are much closer to the final figures. For all these series, the revisions of the change in the second figure released average well below ½ the average month-to-month change (Col. 7). GNP figures, which are on a quarterly basis, show greater relative stability, but the standards should be higher for GNP because it is more important than most series, and also because revisions in the monthly series which are components of GNP tend to cancel out on a quarterly basis.

These findings raise serious questions about the usefulness of some of our first preliminary estimates.

2. *Revisions in seasonal factors.* There are many different methods for adjusting time series for seasonal variations. Most yield good results for historical series,

TABLE III

Measures of Revisions in Seasonally Adjusted Data for Selected Indicators Arising from Revisions in the Raw Data

Part A—Monthly Series

Series*	Absolute average difference in percentage change due to revisions between:			Absolute average month-to-month (or q.-to-q.) % change (4)	Standardized percentage change difference without regard to sign, due to revisions:		
	1st and 2nd estimates (1)	1st and final estimates (2)	2nd and final estimates (3)		Column (1) ÷ (4) (5)	Column (2) ÷ (4) (6)	Column (3) ÷ (4) (7)
6. Value of manufacturers' new orders, durable goods industries (1/60–9/70)	0.95	1.29	0.60	3.48	0.27	0.37	0.17
28. Private housing starts (7/60–9/70)	1.56	1.93	0.85	7.05	0.22	0.27	0.12
29. New building permits, private housing (10/61–9/70)	1.85	1.87	0.15	4.22	0.44	0.44	0.03
41. Employees on nonagricultural payrolls (1/60–9/70)	0.08	0.15	0.09	0.30	0.27	0.50	0.30
47. Index of industrial production (1/60–9/70)	0.11	0.19	0.11	0.91	0.12	0.21	0.12
48. Man-hours in nonagricultural establishments (3/67–9/70)	0.18	0.23	0.13	0.41	0.44	0.56	0.32
54. Sales of retail stores (1/60–9/70)	0.71	0.79	0.29	0.92	0.77	0.86	0.32
56. Manufacturing and trade sales (1/60–8/70)	0.20	0.25	0.09	1.01	0.20	0.25	0.09
65. Book value, manufacturers' inventories of finished goods (1/60–8/70)	—	0.33	—	0.60	—	0.55	—
71. Book value, manufacturing and trade inventories (1/60–8/70)	0.12	0.19	0.08	0.54	0.22	0.35	0.15
750. Wholesale prices, all commodities (3/67–10/70)	—	0.06	—	0.29	—	0.21	—
811. Index of leading indicators (1969-71)	0.48	0.47	0.22	0.86	0.56	0.55	0.26
Part B—Quarterly Series (annual rates of change)							
Gross National Product** (1967-1971)							
200. In current dollars	0.33	0.48	0.45	6.90	0.05	0.07	0.07
205. In constant dollars	0.36	0.67	0.54	3.42	0.11	0.20	0.16
211. Implicit price deflator	0.23	0.39	0.24	4.30	0.05	0.09	0.06

* Numbers preceding series titles are the identification numbers used in *Business Conditions Digest*, a publication of the U.S. Department of Commerce.

** May include the effects of some seasonal revisions.

but all are less accurate for the most recent months. The deficiencies are due partly to the fact that seasonal factors for the most recent years are based upon estimated moving averages, but mainly because, as a practical matter, the most current months must be adjusted by forecasted seasonal factors. It is common practice to forecast seasonal factors one year ahead, and then to revise these factors when all the raw observations for the year have become available.

Table IV shows how large the month-to-month revisions of seasonal factors are, month by month, and how the average of such revisions compares with the average month-to-month change in the seasonal factors for the single latest year for which data are available (1970 or 1971). These revisions tend to be quite small relative to the month-to-month changes in the seasonal factors themselves. The critical question, however, concerns the effect of these revisions on the seasonally adjusted series. This is discussed in the last section of this paper which brings together measures of various types of noise affecting the interpretation of the seasonally adjusted series.

3. *Smoothing out irregular movements.* Irregular movements appear to be the major single culprit in obscuring the underlying cyclical trend. This is evident not only from the preceding table, but also from Table II which shows measures of the seasonal and irregular factor computed over 12-month spans. The major need in bringing out underlying current trends is to make allowance for the irregular factor. A statistical measure, Months for Cyclical Deminance (MCD), is helpful in selecting a technique for accomplishing this objective.[7]

The calculation of MCD requires eliminating the seasonal factor from a series, and then breaking down the seasonally-adjusted series into estimates of the cycle-trend and irregular components. The average month-to-month amplitude of the irregular factor remains about the same regardless of the span of months inter-

[7] For a more detailed discussion of the properties of MCD, see Julius Shiskin "Electronic Computers and Business Indicators," *The Journal of Business*, Vol. XXX, No. 4 (October, 1957), pp. 219–267.

vening between the two months being compared. That is, the average monthly amplitude of the irregular factor will be about the same when computed for consecutive months (January and February, February and March, etc.), for two month spans (January and March, February and April, etc.), for three-month spans (January and April, February and May, etc.) and so on. In contrast, the cycle-trend factor cumulates uninterruptedly in one direction as the span increases, for periods usually lasting six months or more.

For some series, the average amplitude of the irregular factor is smaller than that of the trend-cycle even when the latter is measured over consecutive months. For most series, however, the average irregular factor is greater than the average cycle-trend factor on a monthly basis. However, there is some time span for which the average amplitude cycle-trend factor will overtake that of the irregular factor. Although any index involves information-loss, the span of months required to cause the ratio of the average monthly am-

TABLE IV

Measures of Revisions in Seasonally Adjusted Data for Selected Indicators Arising from Revisions in Seasonal Factors

BCD No.	Series* (1)	Jan.–Feb.	Feb.–Mar.	Mar.–Apr.	Apr.–May	May–June	June–July (2)	July–Aug.	Aug.–Sept.	Sept.–Oct.	Oct.–Nov.	Nov.–Dec.	Average without regard to sign (3)
6. Value of manufacturers' new orders, durable goods	a. Preliminary	8.37	1.72	−1.28	−4.35	7.61	−16.20	2.75	13.23	−2.75	−4.09	0.69	5.73
	b. Final	11.49	0.34	0.95	−3.85	7.63	−14.00	0.22	13.78	−0.81	−5.04	0.49	5.33
	c. Difference	3.12	−1.38	2.23	0.50	0.02	1.80	−2.53	0.55	1.94	−0.95	−0.20	1.33
28. Private housing starts	a. Preliminary	−9.10	47.21	−22.64	−4.44	−3.57	−9.97	3.72	−3.96	1.73	−15.55	−17.52	12.67
	b. Final	−6.68	52.05	18.94	−5.90	−0.52	−3.71	−0.81	−7.05	2.92	−11.53	−20.51	11.87
	c. Difference	2.42	4.84	−3.70	−1.46	3.05	6.26	−4.53	−3.09	1.19	4.02	−2.99	3.41
29. New building permits, private housing	a. Preliminary	16.78	23.67	14.57	−4.07	−1.65	−10.40	−2.85	5.57	−2.11	−4.11	−14.71	9.14
	b. Final	13.95	20.41	19.54	0.00	−5.67	−9.99	−2.06	2.61	−1.86	−6.81	−11.74	8.60
	c. Difference	−2.83	−3.26	4.97	4.07	−4.02	0.41	0.79	−2.96	0.25	−2.70	2.97	2.66
41. Employees on nonagricultural payrolls	a. Preliminary	−0.06	0.46	0.56	0.47	1.15	−1.04	0.14	0.39	0.18	0.07	0.52	0.46
	b. Final	−0.04	0.39	0.54	0.39	1.06	−1.08	0.10	0.50	0.23	0.08	0.37	0.43
	c. Difference	0.02	−0.07	−0.02	−0.08	−0.09	−0.04	−0.04	0.11	0.05	0.01	−0.15	0.06
47. Index of industrial production	a. Preliminary	1.92	0.00	−0.40	−0.10	1.90	−5.20	−3.62	2.50	−0.10	−1.66	−2.08	1.77
	b. Final	2.14	0.70	−0.59	−0.10	2.19	−6.15	3.53	3.31	−0.19	−2.14	−2.99	2.18
	c. Difference	0.22	0.70	−0.19	0.00	0.29	−0.95	−0.09	0.81	−0.09	−0.48	−0.91	0.43
54. Sales of retail stores	a. Preliminary	−7.00	13.65	0.83	5.65	0.29	−1.65	−2.86	−2.33	8.31	−4.31	22.34	6.29
	b. Final	−7.30	12.81	2.29	5.19	0.10	−1.64	−2.65	−2.42	7.66	−4.13	22.37	6.23
	c. Difference	−0.30	−0.84	1.46	−0.46	−0.19	0.01	0.21	−0.09	−0.65	0.18	0.03	0.40
56. Manufacturing and trade sales	a. Preliminary	1.66	6.88	−0.42	0.49	3.08	−7.63	1.75	3.62	2.35	−3.64	5.80	3.39
	b. Final	1.64	6.58	0.09	0.39	3.39	−7.12	0.98	3.91	2.54	−3.94	5.67	3.30
	c. Difference	−0.02	−0.30	0.51	−0.10	0.31	0.51	−0.77	0.29	0.19	−0.30	−0.13	0.31
65. Manufacturers' inventories of finished goods, book value	a. Preliminary	0.59	0.16	2.21	−1.49	−0.51	−2.02	−0.77	−0.89	−0.33	0.73	0.74	0.95
	b. Final	0.81	−0.10	0.92	0.51	−1.01	−1.92	−0.71	−1.09	0.02	0.53	0.59	0.75
	c. Difference	0.22	−0.26	−1.29	2.00	−0.50	0.10	0.06	−0.20	0.35	−0.20	−0.15	0.48
71. Manufacturing and trade inventories, book value	a. Preliminary	0.59	0.63	0.50	−0.15	−0.60	−0.86	−0.70	0.01	1.07	0.83	−1.75	0.70
	b. Final	0.62	0.75	0.44	−0.21	−0.66	−0.76	−0.56	0.11	1.11	0.74	−1.67	0.69
	c. Difference	0.03	0.12	−0.06	−0.06	−0.06	0.10	0.14	0.10	0.04	−0.09	0.08	0.08
502. Exports, excluding military aid	a. Preliminary	−4.69	13.49	−1.56	1.39	−6.89	−2.15	−5.90	4.05	11.99	−4.50	3.82	5.49
	b. Final	0.69	10.97	−0.44	1.13	−6.59	−3.72	−5.29	3.28	13.13	−5.96	3.38	4.96
	c. Difference	5.38	−2.52	1.12	−0.26	0.30	−1.57	0.61	−0.77	1.14	−1.46	−0.44	1.42
512. General imports	a. Preliminary	−5.97	16.51	−0.89	−9.54	12.08	−3.50	−9.34	9.68	0.40	−3.57	8.85	7.30
	b. Final	−7.32	16.89	−1.09	−8.45	12.79	−5.18	−8.48	8.13	2.11	−3.38	5.13	7.18
	c. Difference	−1.35	0.38	−0.20	1.09	0.71	−1.68	0.86	−1.55	1.71	0.19	−3.72	1.22
750. Wholesale prices, all commodities	a. Preliminary	0.26	+0.05	−0.20	0.16	0.09	0.05	−0.46	−0.04	−0.23	−0.04	0.22	0.16
	b. Final	0.13	−0.03	−0.22	0.17	0.06	0.06	−0.45	0.05	−0.19	−0.02	0.07	0.13
	c. Difference	−0.13	0.02	−0.02	0.01	−0.03	0.01	0.01	0.09	0.04	0.02	−0.15	0.05
781. Consumer prices	a. Preliminary	0.00	0.11	0.08	−0.09	0.10	0.09	−0.01	−0.09	0.05	−0.01	−0.03	0.06
	b. Final	−0.05	0.14	0.06	−0.06	0.12	0.05	−0.09	−0.03	0.03	−0.01	0.03	0.06
	c. Difference	−0.05	0.03	−0.02	0.03	0.02	−0.04	−0.08	0.06	−0.02	0.00	0.06	0.04
842. Employment, total	a. Preliminary	0.34	0.34	0.56	0.52	1.27	0.98	−0.31	−1.96	0.49	−0.06	−0.12	0.63
	b. Final	0.44	0.39	0.63	0.31	1.65	0.88	−0.40	−2.05	0.57	−0.05	−0.16	0.68
	c. Difference	0.10	0.05	0.07	−0.21	0.38	−0.10	−0.09	−0.09	0.08	0.01	−0.04	0.11
843. Unemployment total	a. Preliminary	3.11	−7.26	−10.12	−8.19	34.13	−5.17	−8.73	−2.96	−3.24	1.69	−3.09	7.97
	b. Final	4.38	−7.84	−10.79	−8.74	38.96	−6.85	−9.26	−3.57	−3.00	1.03	−3.73	8.92
	c. Difference	1.27	−0.58	−0.67	−0.55	4.83	−1.68	−0.53	−0.61	0.24	−0.66	−0.64	1.11
901. Manufacturing shipments, total	a. Preliminary	8.03	2.23	−1.45	−0.76	3.84	−13.05	5.79	6.99	−0.36	−3.13	−2.89	4.41
	b. Final	8.07	1.90	−1.40	−0.69	4.59	−12.27	4.49	7.69	0.16	−3.69	−2.93	4.35
	c. Difference	0.04	−0.33	0.05	0.07	0.75	0.78	−1.30	0.70	0.52	−0.56	−0.04	0.47
902. Manufacturing new orders, total	a. Preliminary	7.75	1.43	−0.98	−3.02	5.47	−12.61	4.80	8.54	−1.69	−3.81	−1.93	4.73
	b. Final	9.36	0.64	−0.98	−2.62	5.95	−11.24	3.06	9.04	−0.47	−4.64	−1.91	4.54
	c. Difference	1.61	−0.79	0.00	0.40	0.48	1.37	−1.74	0.50	1.22	−0.83	0.02	0.81
903. Manufacturing inventories, total	a. Preliminary	0.48	−0.01	0.28	0.19	−0.62	−0.73	0.00	−0.51	−0.07	0.15	0.29	0.30
	b. Final	0.42	−0.04	0.36	0.15	−0.75	−0.58	0.06	−0.67	0.09	0.12	0.32	0.31
	c. Difference	−0.06	−0.03	0.08	−0.04	−0.13	0.15	0.06	−0.06	0.16	−0.03	0.03	0.08

Note: Preliminary factors were computed from data ending December 1969 or earlier. Final factors were computed from data through 1970, except for series 28 and 29 which go through 1971. The data above show changes in factors for consecutive months.

* Numbers preceding series titles are the identification numbers used in *Business Conditions Digest*, a publication of the U.S. Department of Commerce.

plitude of the irregular to the cyclical factor to fall below unity may be taken as an index of the months required for the cycle factor to become dominant over the irregular factor, on the average. This index is identified by the symbol MCD (Months for Cyclical Dominance).

A frequency distribution of MCD's is shown in Table V for 150 important economic time series, selected as broadly representative of the different activities of the U.S. economy, covering the interwar years 1919–39 and the post-World War II years 1947–56; for 1953–71 a smaller sample of 44 principal indicators selected for use in *Business Conditions Digest* is included. The smaller sample has been selected on the basis of studies of economic indicators by the National Bureau of Economic Research, a private nonprofit organization which is the accepted leader in this field.

Table V provides a broad view of the relationship between the irregular and the cyclical factors in U.S. economic series. The larger sample shows that, on a month-to-month basis, the average change in the irregular factor is larger than that in the cyclical factor in about 75% of the series; over three-month intervals, it is larger in about 25% of the series; over six-month intervals, it is larger in less than 10% of the series. The smaller sample shows similar results, though the 44 principal indicators tend to be somewhat smoother than the 150 series selected earlier.

These results emphasize the importance of knowing the relative magnitudes of irregular and cyclical factors in interpreting current movements in economic series. They indicate that month-to-month movements of most seasonally adjusted series are not "cyclically significant"; for most series, meaningful economic trends are revealed only by spans of three months or longer.[8]

Month-to-month changes are, however, significant for many series, and this group (with MCD equal to one) includes such important series as the index of the leading indicators, the Federal Reserve index of industrial production, employment in nonagricultural establishments, the consumer price index, and manufacturing and trade inventories. MCD for the unemployment rate and for retail sales is two, for new business incorporations and new orders for durable manufacturers—three; for housing starts and the value of total construction contracts—five; and for liabilities of business failures—six. The measure MCD thus provides a guide for interpreting the short-term fluctuations of each series.

TABLE V

Months Required for Cyclical Factor to Dominate the Irregular Factor

Months required for cyclical factor dominance	Percentage distribution of series according to measure, MCD*		
	150 series (1957)		44 series (1972)
	1919–39	1947–56	1953–71
1	23	27	34
2	29	21	25
3	25	23	18
4	14	11	5
5	5	10	5
6 or more	4	8	13
Total	100	100	100

* Months for Cyclical Dominance.

Comparisons of differences between figures a specified number of months apart are also shown by simple moving averages over variable spans. The consecutive values of a three-month moving average show changes over three-month spans (counting from mid-month to mid-month), e.g., January–April, February–May, etc., a four-month moving average changes over four-month spans, a five-month moving average changes over five-month spans, and so on. If the period of a moving average is selected equal to MCD, the moving average will just be dominated, on the average, by the cycle-trend movements in the data.

Empirical studies show that for seasonally-adjusted series, moving averages of period equal to MCD all have about the same degree of smoothness. Consequently, MCD moving averages of highly irregular series, such as construction contracts and the number of business failures, will show their cyclical movements about as clearly as the data for such smooth series as nonagricultural employment and personal income.

Moving averages, however, suffer from the handicap of not reaching to the current month. Since they are centered at the middle month of the interval covered by the average, there are no values for the last month(s). Thus the advantage gained in smoothness is offset to some extent by the disadvantage lost in currency. Longer-term moving averages would, of course, result in smoother series, but they would be less current. The MCD span seems to offer a reasonable compromise between short- and long-term periods in developing smoothness and currency.

[8] It is to be noted, however, that monthly series still provide more information than quarterly series, because they permit three 3-month span comparisons each quarter.

IV. Measures of Various Types of Noise

This brings us to the question: What information about current trends is there in the most recent monthly observations?

As pointed out above, our objective is to break down the original observations into seasonal, irregular, and trend-cycle components. Reasonably satisfactory methods for accomplishing this for historical data have been developed. In the case of current data, however, preliminary estimates are often not up to established standards of accuracy and are revised later. They must, nevertheless, be used in taking the next step toward isolating the trend-cycle component, namely, in making seasonal adjustments. Further, the seasonal factors that are used at that time, like the raw data, are also not up to the established standards, and must be revised later. Thus, estimates of the underlying cyclical trend in current observations suffer from these two limitations, as well as our inability to separate the trend-cycle from the irregular movements.

Some estimates of the separate effects of using preliminary raw data and preliminary seasonal factors have been brought together in Table VI. They are shown along with the average historical cycle-trend and irregular factors and several derived measures. However, this table does not cover all the factors creating noise in current observations, and the totals shown in Col. (6) are, therefore, probably understatements. For example, changes in preliminary estimates arising from revisions in trading day factors are not included. More important, the irregular change ($\overline{I}$), the average historical change in the irregular component (Col. 5), has been shown to be smaller than current measures of $\overline{I}$. Higher current measures of the irregular component arise in part from revisions in the trend-cycle component, which itself is affected not only by revisions in raw data and in seasonal factors, but also by the unavailability of all values of the series required at the time current estimates are computed. A limited study on adult male unemployment showed that current $\overline{I}$ for that

TABLE VI

Measures of Types of Statistical Noise and Signals in 18 U.S. Economic Indicators, 1965-1969

Series [1]	$\overline{C}$ [2]	Average revisions in monthly changes in seasonally adjusted data arising from revisions in:		$\overline{I}$ [3]	N [4]	$\overline{I}/\overline{C}$	N/S	MCD	MSD
		Original data	Seasonal factors						
(1)	(2)	(3)	(4)	(5)	(6) (3+4+5)	(7) (5/2)	(8) (6/2)	(9)	(10)
6. Value of manufacturers' new orders, durable goods	0.80	1.43	1.01	2.36	4.80	2.97	6.00	3	6
28. Private housing starts	1.96	1.82	1.93	5.70	9.45	2.91	4.82	4	5
29. New building permits, private housing	2.51	2.08	2.85	5.91	10.84	2.36	4.32	3	5
41. Employees on nonagricultural payrolls	0.30	0.14	0.08	0.10	0.32	0.35	1.07	1	2
47. Index of industrial production	0.54	0.19	0.18	0.44	0.81	0.82	1.50	1	2
54. Sales of retail stores	0.49	0.87	0.61	0.82	2.30	1.65	4.69	2	5
56. Manufacturing and trade sales	0.53	0.20	0.70	1.21	2.11	2.27	3.98	3	4
65. Manufacturers' inventories of finished goods, book value	0.63	0.31	0.12	0.18	0.61	0.29	0.97	1	1
71. Manufacturing and trade inventories, book value	0.67	0.20	0.08	0.14	0.42	0.21	0.63	1	1
502. Exports, excluding military aid	0.72	0	1.38	6.78	8.16	9.42	11.33	6	12
512. General imports	1.27	0	1.23	4.76	5.99	3.76	4.72	5	5
750. Wholesale prices, all commodities	0.28	0	0.14	0.17	0.31	0.62	1.11	1	2
781. Consumer prices	0.32	0	0.05	0.09	0.14	0.29	0.44	1	2
842. Civilian employment, total	0.20	0	0.12	0.22	0.34	1.13	1.70	2	2
843. Unemployment total	1.13	0	1.55	2.75	4.30	2.44	3.81	3	4
901. Manufacturing shipments, total	0.57	0.75 [5]	0.54	1.01	2.30	1.77	4.04	2	5
902. Manufacturing new orders, total	0.60	0.64 [5]	0.85	1.32	2.81	2.18	4.68	3	5
903. Manufacturing inventories, total	0.72	0.24 [5]	0.10	0.13	0.47	0.18	0.65	1	1

[1] Numbers preceding series titles are the identification numbers used in *Business Conditions Digest*, a publication of the U.S. Department of Commerce.

[2] C is the average month-to-month percentage change without regard to sign in the cyclical component, a smooth flexible moving average of the seasonally adjusted series.

[3] I is the average month-to-month change without regard to sign in the irregular component obtained by dividing the cyclical component into the seasonally adjusted series.

[4] N is that part of the average month-to-month change in a seasonally adjusted series arising from revisions in raw data and in seasonal factors plus average change in the historical irregular component. N does not represent total noise because current changes in the irregular factor tend to be greater than historical changes, because revisions in trading day factors are not included, and also because other possible contributions to noise have not yet been isolated or even identified.

[5] Revisions for the single year 1971.

series was higher than its historical $\overline{I}$ by about 40%.[9] On the other hand, the current cycle-trend ($\overline{C}$) is also probably higher than the historical measure used as the denominator in the ratios shown in Table VI. Consequently, the use of historical rather than current measures of $\overline{I}$ and $\overline{C}$ would not appear to affect substantially the new ratio and the conclusions below.

The data in Table VI suggest that on the average there is about twice as much noise in current observations than is indicated by the $\overline{I}/\overline{C}$ ratio. To take these factors into account another "noise" to "signals" ratio is included in the table (Col. 8). This ratio is computed by summing the revisions in the changes in the seasonally adjusted data arising from revisions in the raw data (Col. 3) and in the seasonal factors (Col. 4), and the historical average change in the irregular factor, $\overline{I}$ (Col. 5), and dividing this sum by the historical average change in the trend-cycle factor, $\overline{C}$ (Col. 2). To distinguish this ratio from the more familiar $\overline{I}/\overline{C}$ ratio, it is designated as the N/S ratio (Col. 8) and to distinguish the derived measure from the more familiar MCD (Months for Cyclical Dominance), the new derived measure is referred to as MSD (Months for Signal Dominance).

The MSD measures (Col. 10) suggest that for most series, one or two months must be added to the comparison span indicated by MCD (Col. 9). Moreover, for some of our most significant indicators (e.g., retail sales, new orders and exports), it appears that three or more months must be added to the comparison span suggested by MCD. Few indicators are left for which comparisons of current figures with those of the previous month are usually significant, i.e., series for which MSD is equal to 1.

This study points to the conclusion that we usually cannot tell from latest monthly statistical observations whether a given series was rising or falling between the latest two months for which data are available, except perhaps when movements are exceptionally large. We usually can tell, however, what happened to the underlying cyclical trend between the observation for the current month and another about three months earlier.

[9] From an unpublished memorandum by Hyman B. Kaitz of the Bureau of Labor Statistics.

CURRENT DEVELOPMENTS

CHARACTERISTICS OF ONE-BANK HOLDING COMPANIES

The 1970 amendments to the Bank Holding Company Act required every one-bank holding company to file a registration statement with the Board of Governors of the Federal Reserve System. These registration statements provide the first comprehensive set of data available on one-bank holding companies. The data have been tabulated n order to describe the major characteristics of one-bank holding companies and their affiliate banks, as of December 31, 1970.

Among other things, the data indicate that: (1) more than one half of all one-bank holding companies became operational after June 1, 1968, and that by December 31, 1970, affiliate banks of these organizations accounted for about 38% of total commercial bank deposits; (2) the majority of holding companies and their affiliate banks are small; (3) banking is less important in the operation of large than of small companies; (4) one-bank holding companies, as a group, engage in a wide range of nonbank activities, but most individual companies operate in only a few nonbank activities; (5) the most important nonbank, financial activities among holding companies are establishments performing functions closely related to banking, personal and business credit institutions and loan correspondents; and (6) the most important nonfinancial activities are insurance agents and brokers, real estate operators and agents, and business services.

Tabulations of the one-bank holding company data are presented and discussed in "One-Bank Holding Companies Before The 1970 Amendments," *Federal Reserve Bulletin* (December 1972). The *Bulletin* may be obtained from the Division of Administrative Services, Board of Governors of the Federal Reserve System, Washington, D.C. 20551 at 70 cents per copy. (STEPHEN A. RHOADES, BANKING MARKETS SECTION, DIVISION OF RESEARCH AND STATISTICS, FEDERAL RESERVE BOARD.)

NSF REPORTS ON NATIONAL R&D RESOURCES

National Patterns of R&D Resources. Funds and Manpower in the United States, 1953-73, recently published by the National Science Foundation, provides a summary picture of national patterns of R&D funding and manpower allocations attributed to the four sectors of the economy—Federal Government, industry, universities, and colleges, and other nonprofit institutions. Time series data on R&D funds cover the period from 1953-73; manpower data begin with 1954. The R&D funding data are obtained from various NSF surveys, generally conducted on an annual or biennial basis.

In addition to other information total R&D funds are compared with those of other countries, presented by selected objective, projected to 1980 by sector, and analyzed by character of work—basic research, applied research, and development.

R&D manpower is presented by sector for selected years and by R&D work activities. This report also contains a discussion on primary sources of new R&D manpower and projections to 1980.

Copies of the report are available from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402 for 80 cents, domestic postpaid or 55 cents, GPO Bookstore. (THOMAS J. MILLS, DIRECTOR, DIVISION OF SCIENCE RESOURCES STUDIES, NATIONAL SCIENCE FOUNDATION.)

INTERNAL MIGRATION

The Bureau of the Census has published five migration reports in its Volume II series of the 1970 Census of Population. These reports are based on responses to questions on State of birth and place of residence in 1965 and are listed below:

Series No.	Title	Pages	Price
PC(2)-2A	State of Birth	277	$3.20
PC(2)-2B	Mobility for States and the Nation	422	$4.55
PC(2)-2C	Mobility for Metropolitan Areas	424	$4.55
PC(2)-2D	Lifetime and Recent Migration	521	$5.05
PC(2)-2E	Migration between State Economic Areas	361	$3.00

These reports present numerous new types of tabulations not prepared from previous censuses. PC(2)-2C, for example, focuses on population exchanges between metropolitan and nonmetropolitan areas and size-of-place flows during the period 1965-70. PC(2)-2B presents detailed cross-tabulations of social, economic, and family statuses conducive to migration. PC(2)-2B also has several tables on characteristics of persons moving betwen regions, frequlently separating those who made such moves before 1965 and those moving since 1965.

Copies of the reports are available, at the prices indicated, from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402, or from any Department of Commerce district office. (LARRY H. LONG, POPULATION DIVISION, BUREAU OF THE CENSUS.)

USE OF SMSA FOR FEDERAL PROGRAM PURPOSES

The Office of Management and Budget has issued an amendment to Circular No. A-46, Statistical Procedures, which is a guide to referencing the Standard Metropolitan Statistical Area (SMSA) in proposed legislation or administrative procedure. This amendment appeared as Exhibit N to Circular No. A-46 via Transmittal Memorandum No. 17, dated May 29, 1973.

Although the SMSA is a statistical construct devised to provide a common basis for the collection and presentation of statistics in areas of major population concentration, it has been increasingly utilized in legislation and administrative procedures as a geographic base for various Federal programs. Such use of the SMSA for program purposes may result in impractical or inequitable administration of Federal programs. Frequently, as a secondary result, there are appeals to redefine individual SMSAs to make them more acceptable for program administration.

The SMSA should be used in the administration of a Federal program *only* when the head of the agency has determined that such use is appropriate for the specific program concerned. While the SMSA may be generally convenient as a geographic reference point in legislation or administrative procedure, it should be referenced in a manner that permits sufficient flexibility in individual areas to accommodate legislative and administrative objections. The text of Exhibit N follows.

References to Standard Metropolitan Statistical Area (SMSA) in legislation and administrative procedures are frequently found in "Definitions" sections of laws or regulations as definitions of the term "metropolitan area," is used and reference is to the SMSA, the follow-

ing language should be used to assure sufficient flexibility:

"A *metropolitan area* shall mean a Standard Metropolitan Statistical Area as defined by the Office of Management and Budget, subject to such modifications with respect to individual areas as the Secretary (Administrator) may determine to be appropriate for the purposes of this Act (regulation)."

If the term, "Standard Metropolitan Statistical Area" is to be used in the operative text of the law or regulation, similar qualifying language will be used parenthetically, immediately following the term.

The SMSA shall be used in the administration of any program only when the Secretary (Administrator) has determined that the use of such areas is appropriate for the achievement of the program's objectives. (ROYE LOWRY, STATISTICAL POLICY DIVISION, OFFICE OF MANAGEMENT AND BUDGET.)

U.S. POPULATION BY ETHNIC ORIGIN

The Bureau of the Census has recently published a report entitled "Characteristics of the Population by Ethnic Origin: March 1972 and 1971," *Current Population Reports,* Series P-20, No. 249. This report presents statistical data on the demographic, social, and economic characteristics (age, sex, family status, size of families, educational attainment, employment status, occupation group, and income) of persons who identified themselves as one of the following eight origin groups: English, Scottish, or Welsh; German; Irish; Spanish; Italian; French; Polish; and Russian.

About one-half of the population identified themselves as belonging to one of these eight origin groups. Analytical text is provided from March 1972 data for the five largest (the first five) of these eight groups. In addition, ten detailed tables show 1972 data for all eight origin groups and identical tables are presented as appendix tables with 1971 data.

Copies of the report (34 pp. $1.25) are available from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. (ELMORE J. SERAILE, POPULATION DIVISION, BUREAU OF THE CENSUS.)

SPANISH ORIGIN PERSONS IN U.S.

A recent Census Bureau publication is entitled "Persons of Spanish Origin in the United States: March 1972 and 1971," *Current Population Reports,* Series P-20, No. 250. This report presents demographic, social, and economic characteristics (age, sex, use of the Spanish language in the home, family status, size of families, place of residence, educational attainment, employment status, occupation group, and income) separately, and in various combinations, for persons who identified themselves as being of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish origin.

In all, 9.2 million persons identified themselves as of Spanish origin, of whom 5.3 million were of Mexican origin and 1.5 million were of Puerto Rican origin.

The major characteristics are covered in an analytical text supported by 15 detailed tables based on 1972 data and 15 identical appendix tables based on 1971 data.

Copies of the report (34 pp., $1.25) may be purchased through the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C., 20402. (ELMORE J. SERAILE, POPULATION DIVISION, BUREAU OF THE CENSUS.)

N.Y. INCOME AND EXPENDITURE PROJECTIONS

Five-Year Projection of Income and Expenditures of the general fund for fiscal years 1974 through 1978 have been prepared by the Division of the Burget of the State of New York and submitted to the legislature as a supplement to the 1973-74 budget. This is the second submission of such an annual summary.

The introduction describes the statutory mandate, the conceptual approach, the definition of base-line expenditures, the value of the projections and their limitations, and the underlying assumptions. The remainder of the report provides the economic and demographic backdrop, information on state income and expenditures, and a summary of findings and conclusions. (HAROLD W. JUHRE, JR., NEW YORK DIVISION OF THE BUDGET, ALBANY, N.Y. 12224.)

POPULATION AND ECONOMIC ACTIVITY IN THE UNITED STATES AND SMSAs

In *Population and Economic Activity in the United States and Standard Metropolitan Statistical Areas* of July 1972, the U.S. Department of Commerce, under the auspices of the Environmental Protection Agency, presents projections of economic activity and population for the Nation's 253 standard metropolitan statisti-

cal areas for the purposes of aiding future planning efforts. The U.S. Department of Housing and Urban Development printed the book.

These projections have been broken out from economic area projections prepared by the Bureau of Economic Analysis, Social and Economic Statistics Administration, Department of Commerce. Data are included on total population, total personal income, per capita income, total employment, total earnings, earnings for major industries and indexes of production for major mining and manufacturing industry groups. Historical and projected data are depicted from 1950 to 2020.

Copies of the report may be obtained from National Technical Information Service, Department of Commerce, Springfield, Virginia, 22151, (Accession No. PB 216-607). The price is $6 for a paper copy or 95 cents for microfiche. (RODERICK O. SYMMES, OFFICE OF DATA SYSTEMS AND PROJECTIONS, DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT.)

BLS REPORT EXAMINES UNION CONTRACTS

The Bureau of Labor Statistics recently completed the third annual report on more than 100 provisions in major collective bargaining agreements, *Characteristics of Agreements Covering 1,000 Workers or More, July 1, 1972* (BLS Bulletin 1784). The study examines 1,300 agreements in effect on July 1, 1972, or later, covering 6.3 million workers. The 1970 report covered 252 agreements involving 5,000 workers or more and the 1971 study, 620 agreements involving 2,000 workers or more. The shift from agreements in effect during a given year to agreements in effect on a specific date within the year provides a handier reference point for labor and management negotiators who use the data.

The 71 tables appearing in the current study include information on the States and regions in which the agreement is effective, the occupational coverage, and contract duration. Among the substantive provisions tabulated are union security, management rights and other noneconomic provisions, wages and related provisions, hours, overtime, and premium pay; paid and unpaid leave; seniority and related clauses; job security; dispute settlement procedures; and employee benefits.

Copies of *Characteristics of Agreements Covering 1,000 Workers or More, July 1, 1972* may be purchased from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402, or from the Bureau's regional offices. (HARRY P. COHANY, CHIEF, DIVISION OF INDUSTRIAL RELATIONS, BUREAU OF LABOR STATISTICS, U.S. DEPARTMENT OF LABOR.)

SOCIAL SECURITY RESEARCH PUBLICATIONS

Reports recently published by the Office of Research and Statistics in the Social Security Administration include those described below. Copies may be purchased from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. When ordering, please use the DHEW publication number.

U.S. Social Security Mission to the U.S.S.R. (Misc. Series, DHEW Pub. No. SSA 73-11901, 51 pp., 85 cents domestic postpaid or 60 cents GPO Bookstore) gives the findings of the American delegation which visited the Soviet Union in October 1971 to study that country's social security and welfare systems. The report emphasizes interrelationships between these systems and unions, health agencies, and other governmental units. It surveys the present Soviet social security system, describes the types of social insurance benefits being paid—especially those to workers on collective farms, reviews social, welfare, and rehabilitation services, and gives the delegation's observations and conclusions.

Women and Social Security: Law and Policy in Five Countries (Research Report No. 42, DHEW Pub. No. SSA 73-11800, 95 pp., 75 cents domestic postpaid or 50 cents GPO Bookstore) presents major provisions relating to women and the mid-1972 status of reform proposals in five countries—Belgium, Federal Republic of West Germany, France, Great Britain, and the United States. Although no definite solutions emerge from the study, the authors (Dalmar Hoskins and Lenore E. Bixby) open up areas for assessment, further research, and policy development. The five case studies were originally prepared for a research conference on women and social security convened by the International Social Security Association and held November 2–4, 1972, in Vienna.

Drug Utilization Review with On-Line Computer Capability (Staff Paper No. 13, DHEW Pub. No. SSA 73-11853, 81 pp., $1 domestic postpaid or 75 cents GPO Bookstore) describes important results from a research study and demonstration carried out from January 1967 to December 1971 at the Los Angeles County-University of Southern California Medical Center. According to Robert F. Maronde, who authored the report and directed the project, preliminary data indicate that the use of an on-line computer system resulted in a sig-

nificant improvement in cost savings, quality of patient drug therapy, prescribing patterns, and use of the skills of pharmacist and physician. The research received support from the U.S. Department of Health, Education, and Welfare.

Achievement, Mobility, and the Draft—Their Impact on the Earnings of Men (Staff Paper No. 14, DHEW Pub. No. SSA 73-11854, 228 pp., $2.60 domestic postpaid or $2.25 GPO Bookstore) links social security earnings data for the years 1957-64 with Selective Service System records of men examined for service during the Korean conflict. The report was developed from a pilot study by the Selective Service System and the Social Security Administration. Using correlation-regression and cross-tabulation techniques, the author, Phillips Cutright, isolates the influence of such variables as geographic mobility, regional location, academic achievement, years of education, race, and military service on the level of earnings and changes in earnings over time for a group of men born between 1927 and 1934.

Medicare: Health Insurance for the Aged, 1971, Reimbursement by State and County is the first volume of data about the Medicare program for 1971. The volume contains an introductory statement concerning reimbursements under the program of 1971, a section on the provisions of the Medicare law and regulations and 41 pages of tables. The tables include: the number of persons enrolled in the program and total reimbursements by region and State; similar data by State and county; and data by State and metropolitan-nonmetropolitan residence.

Medicare: Health Insurance for the Aged, 1968, Section 1, Summary, is the second volume of data to be published on the Medicare program in 1968. This 61-page report describes the types of benefits reimbursed under Medicare in 1968, how reimbursed services were used, the amount of reimbursement per person served, and distribution of amounts reimbursed by age, race, sex, and geographical area, as well as including a short section on those Medicare enrollees who used no reimbursed services during the year. There are 16 general tables analyzing all phases of the Medicare program for 1968.

Single copies of these reports are available for official use from the Publications Staff, Social Security Administration, Room 1120, Universal North Building, 1875 Connecticut Avenue, N.W., Washington, D.C. 20009 (telephone 202-382-3261 or within Government, 128-3261). (ROBERT ROBINSON, SOCIAL SECURITY ADMINISTRATION, DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE.)

HISTORICAL DEVELOPMENT OF ECONOMIC CENSUSES

Economic Censuses of the United States: Historical Development was recently issued by the Bureau of the Census as Working Paper No. 38. This is a summary report on the development of economic censuses in the United States from the first census of manufactures taken as part of the Decennial Census in 1910 to the several censuses included in the 1972 Economic Censuses (manufactures, mineral industries, retail trade, wholesale trade, selected services, transportation, and construction).

The report indicates the relationship between the broad subject matters added to the economic censuses and the major developments in the Nation, and traces the concurrent changes in census techniques and in equipment available for handling the data.

Copies of Working Paper No. 38 (18 pp., 50 cents) may be purchased from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402 or from any Department of Commerce district office. (PHYLLIS G. CARTER, CHIEF, CENSUS HISTORY STAFF, DATA USER SERVICES OFFICE, BUREAU OF THE CENSUS.)

OMNITAB USERS' GUIDE

A Users' Guide to the OMNITAB Command "Statistical Analysis," by H. H. Ku, was issued in March 1973 by the National Bureau of Standards as Technical Note 756. This publication gives supplemental information for the OMNITAB command "Statistical Analysis" described in NBS Handbook 101 (*OMNITAB: A Computer Program for Statistical and Numerical Analysis,* issued March 1966) and in NBS Technical Note 52 (*OMNITAB II User's Manual,* issued October 1971). This command gives automatic printout of a variety of statistics computed from a set of observations. The interpretations of these statistics and their uses are described in some detail in this Note, which aims to be self-contained in the sense that users may gain sufficient understanding for their immediate purposes. References to popular statistical texts are given whenever available and to papers in statistical literature only when discussions are not readily found in text books. In line with this, the reader is also provided with computation formulas and a number of statistical tables that he would otherwise need to seek elsewhere.

This is the first of a series of interpretive notes for a number of commands in the OMNITAB system that have the automatic printout feature. Copies of Techni-

cal Note 756 may be ordered prepaid, 75 cents each, from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20420, or local U.S. Department of Commerce Field Offices as SD Catalog No. C13.46:756; microfiche copies may be ordered prepaid, 95 cents each, from the National Technical Information Service, Springfield, Va. 22151, as NBS Tech. Note 756.

Copies of NBS Handbook 101 (SD Catalog No. C13.11:101) 266 pp., $3, or NBS Technical Note 552 (SD Catalog No. C13.46:552) 264 pp., $3, may also be purchased from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

GEOGRAPHIC BASE FILE SYSTEM

Geographic Base File System—Establishing a Continuing Program presents the proceedings of the fourth conference devoted to the discussion of the Census Bureau's Geographic Base Files. The conference was held in Seattle, Washington, on January 18 and 19, 1973.

The major purpose of this series of conference is two fold: (1) to improve communication among those agencies and organizations who are assisting the Census Bureau in maintaining the file for their respective areas and (2) to provide a vehicle for the mutual exchange of information and experiences in the management and use of the file.

Case studies were presented concerning the success or failure in establishing a continuing program for the areas of Seattle-Tacoma, Washington; St. Louis, Missouri; Albuquerque, New Mexico; and Miami, Florida. Other presentations included the requirements of a Geographic Base File for public safety; the Department of Transportation's initial steps to establish a National Geographic Base File; and the use of Geographic Base Files for computer mapping. The Geography Division of the Census Bureau also made a presentation describing the CUE program (Correction, Update, and Extension of the Geographic Base Files), a program that is being established with the cooperation of local coordinating agencies to maintain the files in a current condition.

Unfortunately, but as expected, the current files are becoming somewhat outdated as the dynamics of city growth and change continue to modify political, statistical and geographic boundaries. Obviously if the Geographic Base Files are to be helpful to local agencies and private organizations, as well as to the Census Bureau, the files must be maintained in a current condition. However, the difference in user objectives is going to play a major role in the establishment and management of a continuing maintenance program.

Those agencies and organizations that are dealing with masses of addressed data and that will be using the Geographic Base Files to organize the data into meaningful, understandable, and usable information will find these proceedings extremely valuable since it provides an insight into the key problems of file maintenance within a community.

Copies of *Geographic Base File System—Establishing a Continuing Program,* Report GE 60 No. 4(112 pp., $1.25) may be purchased from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

Copies of the first three conference proceedings, also published by the Bureau of the Census, may be purchased from the Superintendent of Documents at the prices listed below:

1. *Use of Address Coding Guides in Geographic Coding—Case Studies,* Report GE 60 No. 1 (75 cents).

2. *Geographic Base Files—Plans, Progress, Prospects,* Report GE 60 No. 2 ($1.00).

3. *Geographic Base File System—Uses, Maintenance, Problem Solving,* Report GE 60 No. 3 ($1.25). (JACOB SILVER, GEOGRAPHY DIVISION, BUREAU OF THE CENSUS.)

RECENT VITAL AND HEALTH STATISTICAL REPORTS

A number of health and vital statistics reports published recently by the National Center for Health Statistics, Department of Health, Education, and Welfare, are described below. In the case of sales items, copies may be purchased from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. When ordering, please include the DHEW publication number.

Standardized Micro-Data Tape Transcripts, DHEW Publication No. (HSM) 73-1213, 14 pp., describes the format and contents of 18 standardized micro-data tapes currently available for public use from the National Center for Health Statistics, 5600 Fishers Lane, Rockville, Md. 20852. The Center's policy on release of data for elementary units (persons, events, or establishments) is also discussed, with particular attention to the steps taken to protect confidential information.

Plan and Operation of the Health and Nutrition Examination Survey (Series 1, No. 10a, DHEW Publication No. (HSM) 73-1310, 46 pp., 75 cents domestic

postpaid or 50 cents GPO bookstore) describes the development, plan, and operation of the survey; (Series 1, No. 10b, DHEW Publication No. (HSM) 73-1310, 77 pp., $1 domestic postpaid or 75 cents GPO bookstore) provides the data collection forms of the survey.

Cohort Mortality and Survivorship: U.S. Death-Registration States, 1900-1968 (Series 3, No. 16, DHEW Publication No. (HSM) 73-1400, 36 pp., 70 cents) presents an analysis of mortality rates by age, color, and sex of selected generations of 5-year birth cohorts born 1896-1900 through 1926-1930. The study also compares cohort and period life table survivorship by single years of age, color, and sex for selected 5-year cohorts born 1899-1903 through 1928-1932.

Uniform Hospital Abstract: Minimum Basic Data Set (Series 4, No. 14, DHEW Publication No. (HSM) 1451, 17 pp., 50 cents domestic postpaid or 35 cents GPO bookstore) is a report, prepared under the auspices of the U.S. National Committee on Vital and Health Statistics, considering the purposes which would be served by data on patients discharged from hospitals and the minimum basic set of data items which it should be feasible to record and which would serve most of these purposes. In addition to specifying the minimum basic data set, the report provides definitions of each item and classifications of the information which would be recorded.

Use of Special Aids (Series 10, No. 78, DHEW Publication No. (HSM) 73-1504, 23 pp., 55 cents) presents statistics on the distribution and use of artificial limbs, braces, crutches, canes, special shoes, wheelchairs, walkers, and other special aids for getting around. The report is based on data collected in the Health Interview Survey in 1969.

Current Estimates (Series 10, No. 69, DHEW Publication No. (HSM) 73-1505, 69 pp., 95 cents domestic postpaid or 70 cents GPO bookstore) provides provisional estimates from the Health Interview Survey during 1971 of incidence of acute conditions, limitation of activity, injuries, hospital discharges, disability days, and frequency of dental and physician visits.

Four reports from the Health Examination Survey, 1963-65, report on *Skinfold Thickness of Children 6-11 years* (Series 11, No. 120, DHEW Publication No. (HSM) 73-1602, 60 pp., $1), *Relationships Among Parent Ratings of Behavioral Characteristics of Children* (Series 11, No. 121, DHEW Publication No. (HSM) 73-1603, 49 pp. $1), *Hearing and Related Medical Findings Among Children:* Race, Area, and Socioeconomic Differentials (Series 11, No. 122, DHEW Publication No. (HSM) 73-1604, 33 pp., 70 cents), and *Selected Body Measurements of Children 6-11 Years* (Series 11, No. 123, DHEW Publication No. (HSM) 73-1605, 48 pp., 75 cents domestic postpaid or 50 cents GPO bookstore.). The first report from the Health Examination Survey, 1966-70, is *Height and Weight of Youths 12-17 Years* (Series 11, No. 124, DHEW Publication No. (HSM) 73-1606, 81 pp., $1 domestic postpaid or 75 cents GPO bookstore).

Of four recent reports on nursing homes, two are based on data collected in 1968 and two on data collected in 1969. These reports are: *Nursing Homes: Their Admission Policies, Admissions, and Discharges* (Series 12, No. 16, DHEW Publication No. (HSM) 73-1701, 63 pp., 90 cents domestic postpaid or 65 cents GPO bookstore); *Services and Activities Offered to Nursing Home Residents* (Series 12, No. 17, DHEW Publication No. (HSM) 73-1702, 42 pp., 75 cents); *Administrators of Nursing and Personal Care Homes: Education and Training* (Series 12, No. 18, DHEW Publication No. (HSM) 73-1703, 71 pp., 95 cents domestic postpaid, 70 cents GPO bookstore); and *Characteristics of Residents in Nursing and Personal Care Homes* (Series 12, No. 19, DHEW Publication No. (HSM) 73-1704, 41 pp., 75 cents domestic postpaid or 50 cents GPO bookstore).

ENTERPRISE STATISTICS

The Bureau of the Census has published the third part of the publication series 1967 *Enterprise Statistics*, Part 3, "Link of Census Establishment and IRS Corporation Data." This publication provides statistical users the ability to relate, on a comparable basis, the published industry distributions of corporate financial data (such as net income and depreciation), available in the 1967 IRS *Statistics of Income* publications, with the establishment data (such as payroll and value added) tabulated in the 1967 Economic Censuses. The published tables present a corporation-establishment industry cross-tabulation to show the extent and pattern of census establishment diversification (by 4-digit Standard Industrial Classification code) for the corporations classified in each IRS industry covered in the 1967 Economic Censuses.

Copies of this publication (472 pp., $5.30) are available from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. (LAWRENCE E. BRITT, ECONOMIC STATISTICS AND SURVEYS DIVISION, BUREAU OF THE CENSUS.)

SCHEDULE OF RELEASE DATES FOR PRINCIPAL FEDERAL ECONOMIC INDICATORS

August 1973

Release dates scheduled by agencies responsible for the principal economic indicators of the Federal Government are given below. These are target dates that will be met in the majority of cases. Occasionally agencies may be able to release data a day or so earlier or may be forced by unavoidable compilation problems to release a report one or more days later.

A similar schedule will be shown here each month covering release dates for the following month. The indicators are identified by the titles of the releases in which they are included; the source agency; the release identification number where applicable; and the *Business Conditions Digest* series numbers for all BCD series included, shown in parentheses. Release date information for additional series can be found in publications of the sponsoring agencies.

Date		*Subject*	*Data for*
August	1	Construction Expenditures, (Press release) Census, C-30 (69)	June
	1	Manufacturers' Shipments, Inventories & Orders, Census, M 3-1 (20, 65, 852)	June
	1	Condition Report of Large Commercial Banks, Federal Reserve (FRS), H.4.2 (72)	Week ending July 25
	2	Money Stock Measures, FRS, H.6 (85, 102, 103)	Week ending July 25
	2	Factors Affecting Bank Reserves and Condition Statement of Federal Reserve Banks, FRS, H.4.1 (93)	Week ending August 1
	2	Wholesale Price Index, Bureau of Labor Statistics (BLS), (55, 58, 750, 751, 752)	July
	3	Review of Productivity, Wages and Prices, BLS, (748, 749, 858)	2 Q '73
	3	U.S. Government Security Yields and Prices, FRS, G.14 (114)	July
	3	Consumer Credit, FRS, G.19 (66, 113)	June
	3	Manufacturers' Export Sales and Orders, Census, M4-A (506)	June
	3	The Employment Situation, BLS, (1, 21, 40, 41, 42, 43, 44, 740, 841-848)	July
	6	Monthly Wholesale Trade, (Press release) Census, BW	June
	7	Retail Trade Report, (Press release) Census (54)	June
	8	Condition Report of Large Commercial Banks, FRS, H.4.2 (72)	Week ending August 1
	9	Factors Affecting Bank Reserves and Condition Statement of Federal Reserve Banks, FRS, H.4.1 (93)	Week ending August 8
	9	Money Stock Measures, FRS, H.6 (85, 102, 103)	Week ending August 1

Date	Subject	Data for
August 10	Advance Monthly Retail Sales (Press release), Census, (54)	July
13	Manufacturing and Trade Inventories and Sales, Bureau of Economic Analysis (BEA), (31, 56, 71, 851)	June
15	Yields on FHA Insured New Home 30-Year Mortgages, HUD (118)	August 1
15	Personal Income, BEA, (52, 53)	July
15	Balance of Payments on official reserve transactions and net liquidity balance, BEA, (521, 522)	2 Q '73
15	Condition Report of Large Commercial Banks, FRS, H.4.2 (72)	Week ending August 8
16	Business Indexes (Industrial Production and Components), FRS, G.12.3 (47, 853)	July
16	Money Stock Measures, FRS, H.6 (85, 102, 103)	Week ending August 8
16	Factors Affecting Bank Reserves and Condition Statement of Federal Reserve Banks, FRS, H.4.1 (93)	Week ending August 15
16	Housing Starts (Press release), Census, C-20 (28, 29)	July
17	Gross National Product, (Revised) BEA (200, 205)	2 Q '73
17	Corporate Profits BEA, (16, 22, 68)	2 Q '73
17	Federal Receipts and Expenditures, NIA Basis, BEA, (600, 601, 602)	2 Q '73
21	Consumer Price Index, BLS, (781, 782, 783, 784)	July
21	Real Earnings, BLS, (741, 859)	July
21	Advance Report on Durable Goods, Manufacturers' Shipments and Orders, Census, M3-1 (6, 24, 25, 96, 647, 648)	July
22	Condition Report of Large Commercial Banks, FRS, H.4.2 (72)	Week ending August 15
23	Money Stock Measures, FRS, H.6 (85, 102, 103)	Week ending August 15
23	Factors Affecting Bank Reserves and Condition Statement of Federal Reserve Banks, FRS, H.4.1 (93)	Week ending August 22
23	Average Yields of Long-Term Bonds, Treasury Bulletin (115, 116)	July
24	Productivity and Costs in Nonfinancial Corporations, BLS	2 Q '73
24	Export and Import Merchandise Trade, Census, FT-900 (500, 502, 512)	July
28	Advance Business Conditions Digest, BEA: (12, 33, 69, 813, 817)	June
	(5, 10, 17, 45, 59, 62, 810, 811, 814, 815, 816, 820, 825, 830, 853, 860)	July
29	Defense Indicators, BEA, (625)	July
29	Condition Report of Large Commercial Banks, FRS, H.4.2 (72)	Week ending August 22
30	Money Stock Measures, FRS, H.6 (85, 102, 103)	Week ending August 22
30	Factors Affecting Bank Reserves and Condition Statement of Federal Reserve Banks, FRS, H.4.1 (93)	Week ending August 29
30	Agricultural Prices (Agriculture)	Mid August
30	Manufacturers' Shipments, Inventories & Orders, Census M3-1 (20, 65, 852)	July

SELECTED NEW REPORTING PLANS AND FORMS

The following listing gives a brief description of a new reporting form approved in June by the Office of Management and Budget under the provisions of the Federal Reports Act.

Department of Agriculture

Statistical Reporting Service

Survey of credit needs for cattle producers (single-time).—Survey to determine the credit needs of cattle producers in the South. Data will be collected from a sample of cattlemen in five selected States and used to evaluate the feasibility of establishing other sources of livestock credit. (For further information: Homer Preston, Farmer Cooperative Service, U.S. Department of Agriculture, telephone 202-447-8940.)

PERSONNEL NOTES

DEPARTMENT OF AGRICULTURE

Statistical Reporting Service: ROGER M. FOSTER, formerly Head of the Prices Received Section, Prices and Labor Branch, Estimates Division, has been named to head the South Carolina Statistical Office.

DEPARTMENT OF COMMERCE

Social and Economic Statistics Administration

PAUL LIBERMAN and NORMAN WATTS have been designated Special Assistants to the Administrator.

Bureau of the Census: JOSEPH F. ARBENA has been designated Program Manager for Revenue Sharing Surveys, Governments Division. JOHN R. COLEMAN, previously designated as Acting, has now been designated Assistant Division Chief for Survey Operations, Governments Division.

The International Statistical Programs Center has reported the following change in its overseas advisory staff operating under the AID Technical Assistance Programs: SOL D. HELFAND has completed a regular tour of duty as Economic Statistics Adviser to the Government of South Vietnam and has returned to the United States for home leave, consultation, and subsequent return to post. CHARLES B. LAWRENCE, JR., has completed a regular tour of duty as Principal Statistical Adviser to the Government of Brazil and is returning to the U.S. for retirement after 31 years of Federal Government service.

Bureau of Economic Analysis: ROGER H. BEZDEK (telephone 967-4977) formerly an Assistant Professor at the University of Illinois, Urbana, Illinois, has joined the Interindustry Economics Division as an economist.

DISTRICT OF COLUMBIA GOVERNMENT

ROBERTO FUENTES, has been appointed Chief of the newly redesignated Statistics and Evaluation Division, Department of Human Resources. Mr. Fuentes has been with the Department since 1967. The Department is an umbrella agency responsible for the public health, mental health, narcotics, social services and welfare programs in D.C. The Statistics and Evaluation Division has the responsibility for providing statistical support services to the Department's many programs including the modification of data collection systems to meet the Department's needs.

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

Social Security Administration: THOMAS B. JABINE, formerly Chief of the Statistical Research Division, U.S. Bureau of the Census, has joined the Office of Research and Statistics, as Chief Mathematical Statistician.

DEPARTMENT OF THE TREASURY

Internal Revenue Service, Statistics Division: JOEL R. STUBBS, formerly with the U.S. Postal Service, has been appointed Chief, Corporation Statistics Staff, Income, Finance and Wealth Branch. Mr. Stubbs filled the vacancy of BARBARA THOMPSON who has been appointed Equal Employment Opportunities Officer.

RETIREMENTS

DEPARTMENT OF AGRICULTURE

Economic Research Service: ANTHONY G. MATHIS, Head of the Dairy Section, Commodity Analysis Branch, Economic and Statistical Analysis Division; EARL F. HODGES, Leader of the Feed Livestock Group, Farm Production Economics Division; and WYLIE D. GOODSELL, Leader of the Type-of-Farm Analysis Group, Farm Production Economics Division.

Statistical Reporting Service: GORDON BUTLER, Head, Dairy and Cold Storage Section, Estimates Division, THOMAS L. STUART, State Statistician in Charge of the Virginia Office, and COYLE H. WHITWORTH, State Statistician in Charge of the South Carolina Office.

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

SIGMUND SCHOR, Director of the National Center for Social Statistics, retired effective June 30 to enter private consulting.

DEPARTMENT OF LABOR

Bureau of Labor Statistics: HYMAN B. KAITZ has retired as Assistant Commissioner for Current Employment Analysis after 38 years of Federal service. Among the honors he received was the Commissioner's Eminent Achievement Award in January for "outstanding contributions to the Nation's knowledge and understanding of employment statistics and other socioeconomic data." EDWARD L. DIAMOND has retired as Deputy Director for Administrative Management, concluding a Federal career of 37 years.

INTERSTATE COMMERCE COMMISSION

EDWARD MARGOLIN, Director of the Bureau of Economics and before that Assistant to the Undersecretary of Commerce for Transportation, has retired from Federal Government service.

DEATHS

ARTHUR E. TIEMANN, Chief Statistician with the World Bank died on May 5, 1973 at the age of 55. Before joining the World Bank, Mr. Tiemann had worked with the Navy Department and the Federal Aviation Administration.

For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.
Price 35 cents (single copy). Subscription Price: $3.50 domestic postpaid; $1.00 additional for foreign mailing.

UNITED STATES
GOVERNMENT PRINTING OFFICE
DIVISION OF PUBLIC DOCUMENTS
WASHINGTON, D.C. 20402

OFFICIAL BUSINESS

PENALTY FOR PRIVATE USE TO AVOID
PAYMENT OF POSTAGE $300
(GPO)

EXECUTIVE OFFICE OF THE PRESIDENT · OFFICE OF MANAGEMENT AND BUDGET